Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method of <u>optimizing dissemination of information</u> ~~optimization~~ in a distributed environment, said method comprising:

receiving a request <u>at a first server for at least one of an application program and data from a client</u>;

retrieving <u>at said first server</u> a ~~plurality of services~~ <u>location of a second server within said distributed environment storing said at least one of said application program and said data</u> associated with said request;

packaging ~~said plurality of services into~~ a message object with data associated with said request; and

transmitting said message object to [[a]] <u>said second server for servicing said client</u> ~~first service of said plurality of services~~.

2. (currently amended) The method according to claim 1, further comprising:

receiving said message object <u>at said second server</u>; <u>and</u>

~~determining a service provider for said first service of said plurality of services;~~

initiating <u>said servicing of said client</u> ~~said first service with data associated with said first service~~ at said <u>second server</u> ~~local service provider~~ in response to a determination of said <u>second server</u> ~~local service provider~~ as a provider of said <u>at least one of said application program and said data</u> ~~first service~~[[;]] ~~and~~

~~initiating a subsequent service to said first service from said local service provider~~.

3. (currently amended) The method according to claim 1, further comprising:

receiving said message object <u>at said second server</u>; <u>and</u>

~~determining a service provider for said first service of said plurality of services; and~~

transmitting said message object to a <u>third server</u> ~~remote service provider~~ in response to said determination of said <u>third server to be a</u> ~~remote service~~ provider ~~as a provider~~ of said <u>at least one of said application program and said data</u> ~~first service~~.

4. (currently amended) The method according to claim 1, <u>further comprising</u> ~~wherein said generation of plurality of services associated with said request comprises~~:

determining said <u>at least one of said application program and said data</u> ~~plurality of services~~ associated with said request from a profile;

determining <u>if said second server</u> ~~an associated service provider for each service of said plurality of services~~ <u>is</u> associated with said request; and

selecting said <u>second server</u> ~~associated service provider~~ that is ~~local~~ <u>within a most efficient path</u> for <u>transferring</u> each <u>of said at one of said application program and said data</u> ~~service of said plurality of services~~ associated with said request <u>to said client</u>.

5. (currently amended) The method according to claim <u>1</u> [[4]], further comprising:

packaging ~~said plurality of services associated with~~ said request and ~~associated~~ <u>a location of said at least one of said application program and said</u> data providers into an itinerary; and

forwarding said itinerary to <u>said second server</u> [[a]] ~~first associated service provider of said first service of said plurality of services~~ associated with said request.

6. (currently amended) The method according to claim 5, further comprising:

completing ~~said~~ a first service associated with said request on said second server ~~first associated service provider~~; and

initiating ~~said~~ a second service from said second server ~~first associated service provider~~ in response to said completion of said first service.

7. (currently amended) A method of optimizing dissemination of information ~~optimization~~ in a distributed environment, the method comprising:

determining at a first server a location of at least one of an application program and data ~~service provider for~~ associated with a request from a client ~~for a current~~; and

transmitting a message object containing data associated with said request to a second server;

initiating a transfer of said at least one of said application program and said data ~~said current service at~~ from [[a]] said second server ~~local service provider~~ in response to said determination of said location of said at least one of an application program and said data ~~local service provider as a provider of said current service[[;]]~~ and

~~invoking a request for a subsequent service to said current service by said local service provider~~.

8. (currently amended) The method according to claim 7, further comprising:

transmitting said request ~~for a current service~~ to said second server ~~a remote service provider~~ in response to said determination of said location of said at least one of said application program and said data ~~remote service provider as a provider of said current service~~.

9. (currently amended) The method according to claim 8, further comprising:

invoking a request for a subsequent said at least one of said application and said data service to said a third server current service by said second server remote service provider.

10. (currently amended) A system for optimization optimizing dissemination of information in a distributed environment, said system comprising:

a network;

a plurality of client[[s]] configured to request at least one of an application program and data services over said network;

a plurality of servers service providers, each server service provider configured to interface with said plurality of client[[s]] over said network; and

a service-chaining module configured to be executed on each service provider of said plurality of servers service providers, wherein said service-chaining module is configured to retrieve a location of said at least one of said application program and said data plurality of services associated with a received request, and is also configured to package said location of said at least one of said application program and said data plurality of services as an itinerary list into a message object, and is further configured to transmit said message object to another server with said distributed environment first service of said plurality of services.

11. (currently amended) The system according to claim 10, wherein:

said service-chaining module is ~~further~~ configured to generate an itinerary object containing said <u>at least one of said application program and said data</u> ~~plurality of services~~ associated with said request and said associated <u>location of said at least one of said application program and said data</u> ~~data provider for each service of said plurality of services~~ associated with said request.

12. (currently amended) The system according to claim 11, wherein:

said itinerary object is an instantiation of an itinerary class.

13. (currently amended) The system according to claim 12, wherein:

said itinerary class is implemented using an object oriented programming language.

14. (currently amended) The system according to claim 11, wherein:

said service-chaining module is ~~further~~ configured to generate a message object configured to contain said itinerary object.

15. (currently amended) The system according to claim 14, wherein:

said service-chaining module is ~~further~~ configured to forward said message object to a selected <u>server</u> ~~service provider of said plurality of service providers~~.

16. (currently amended) The system according to claim 10, further comprising:

a service interface configured to be executed on each <u>server</u> ~~service provider~~ of said plurality of <u>servers</u> ~~service providers~~, wherein said service interface is configured to perform a selected service on said itinerary object.

17. (currently amended) The system according to claim 10, wherein<u>:</u>

said service<u>-chaining</u> module is ~~further~~ configured to receive said message object, to determine <u>said location of said at least one of said application program and said data</u> ~~a service provider for said first service of said plurality of services~~, to initiate <u>transfer of</u> said <u>at least one of said application program and said data</u> ~~first service with data associated with said first service~~ at said local <u>server</u> ~~service provider~~ in response to a determination of said local <u>server</u> ~~service provider~~ as a provider of said <u>at least one of said application program and said data</u> ~~first service~~ and to initiate a subsequent <u>transfer of said at least one of said application program and said data</u> ~~service to said first service~~ from said local <u>server</u> ~~service provider~~.

18. (currently amended) The method according to claim 10, wherein<u>:</u>

said service<u>-chaining</u> module is ~~further~~ configured to receive said message object, to determine a <u>server</u> ~~service provider for said first~~ <u>to</u> service <u>said message object</u> ~~of said plurality of services~~, and to transmit said message object to a remote <u>server</u> ~~service provider~~ in response to said determination of said remote <u>server</u> ~~service provider~~ as a provider of said <u>at least one of said application program and said data</u> ~~first service~~.

19. (currently amended) A computer readable storage medium on which is embedded one or more computer programs, said one or more computer programs implementing a method of optimization, said one or more computer programs comprising a set of instructions for:

determining at a first server a location of at least one an application program and data service provider for a request for [[a]] at least one of said application program and said data from a client current service;

transmitting a message object containing data associated with said request to a second server;

initiating transfer of said at least one an application program and data current service at [[a]] said second server local service provider in response to said determination of said second server local service provider as a provider of said at least one of said application program and said data current service; and

invoking a request for a subsequent said at least one of said application program and said data service to said current service by said second server local service provider.

20. (currently amended) The computer readable storage medium in according to claim 19, said one or more computer programs further comprising a set of instructions for:

transmitting said request for said at least one of said application program and said data [[a]] current service to a remote server service provider in response to said determination of said remote server service provider as a provider of said at least one of said application program and said data current service.

21. (currently amended) A system for <u>optimizing dissemination of information</u> optimization in <u>a</u> distributed environment, said system comprising:

a network;

a plurality-of client[[s]] configured to request <u>at least one of an application program and data</u> services over said network;

a plurality of <u>servers</u> service-providers, each <u>server</u> service-provider configured to interface with said plurality-of client[[s]] over said network; and

a service-chaining module configured to receive a message object <u>from another server</u> configured <u>and</u> to contain an itinerary list of <u>said at least one of said application program and said data</u> in response to [[a]] <u>said</u> request from one of said plurality of <u>servers</u> service-providers over said network, wherein said service-chaining[[-]] module is configured to perform <u>transfer of an</u> identified <u>said at least one of said application program and said data</u> service on said itinerary list of-services on a selected <u>server</u> service-provider of said plurality of <u>servers to said client</u> service-providers and is also configured to initiate a subsequent <u>transfer of said at least one of said application program and said data</u> service to said <u>client</u> identified-service from said selected <u>server</u> service-provider.

22. (currently amended) The system according to claim 21, wherein<u>:</u>

said selected <u>server</u> service-provider is preferentially selected to be local to said service-chaining module.

23. (currently amended) The system according to claim 22, wherein<u>:</u>

said service-chaining module is configured to reference a configuration data structure to determine said selected <u>server</u> service-provider.

24. (original) The system according to claim 23, wherein:

said configuration data structure is local to said service-chaining module.

25. (currently amended) The system according to claim 23, wherein:

said configuration data structure includes a[[n]] Lightweight Directory Access Protocol LDAP server.